

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-32 (Cancelled).

Claim 33 (Currently Amended): An electronic emission device including plural electron beams comprising:

a first structure ~~comprising~~ including a plurality of emitting sources of electron beam beams; ~~hybridized with~~

a second structure ~~comprising~~ including a plurality of diaphragm openings; and metallic balls made from at least one of fusible metal alloys and gold interposed between the first structure and the second structure and hybridizing the first structure with the second structure.

Claim 34 (Previously Presented): The device according to Claim 33, in which the second structure includes an electrode or a metallic or conductive or semiconductive membrane.

Claim 35-36 (Cancelled).

Claim 37 (Previously Presented): The device according to Claim 33, in which at least one diaphragm opening has two different opposite opening surfaces, the opening surface of a first side of the diaphragm having an area greater than an area of the opening surface of a second side of the diaphragm.

Claim 38 (Previously Presented): The device according to claims 33, in which each diaphragm opening comprises a bevelled, flat, concave, or convex opening edge profile.

Claim 39 (Currently Amended): The device according to claim 33, in which each of the first structure and the second structure comprises a periodic arrangement of sources of emission of electrons or diaphragm openings, the structures having a matrix arrangement or a multilinear arrangement or a linear arrangement, regular or irregular.

Claim 40 (Previously Presented): The device according to Claim 33, in which the sources of electron beam emission and the diaphragm openings are arranged with a spacing of about a few microns to one millimeter.

Claim 41 (Previously Presented): The device according to Claim 33, further comprising electrostatic or magnetic or electromagnetic means for focusing electron beams.

Claim 42 (Previously Presented): The device according to Claim 33, further comprising means for magnetic projection.

Claim 43 (Previously Presented): The device according to Claim 33, further comprising a polarized anode or electrode structure arranged outside the second structure of diaphragm openings.

Claim 44 (Previously Presented): The device according to Claim 33, in which the second structure comprises at least one conductive part and at least one dielectric part.

Claim 45 (Currently Amended): The device according to Claim 33, in which the second structure comprises two levels of electrodes or membranes, ~~metallic, conductive,~~ which are metallic, conductive, and attached to at least one dielectric layer.

Claim 46 (Previously Presented): The device according to Claim 33, in which the second structure includes, around zones of the diaphragm openings, a thickness of about a fraction of a micrometer to a few hundred micrometers.

Claim 47 (Previously Presented): The device according to Claim 33, in which the second structure includes, outside zones of the diaphragm openings, a thickness of about one micrometer to around one millimeter.

Claim 48 (Previously Presented): The device according to Claim 33, in which the second structure includes an alveolar structure insulating each opening or plural groups of openings from one another, such that each opening or each group of openings is subjected to a respective polarization potential.

Claim 49 (Currently Amended): The device according to Claim 33, in which at least one side of the diaphragm of the second structure is ~~dipped into~~ disposed in an electric field for acceleration or focusing of electrons.

Claim 50 (Previously Presented): The device according to Claim 33, in which the second structure of diaphragm opening comprises two opposite sides, a first side facing an electric field, and a second side facing another electric field.

Claim 51 (Currently Amended): The device according to Claim 33, in which at least one diaphragm opening has two different opposite opening surfaces, the opening surface of a first side of the diaphragm having an area greater than an area of the opening surface of the second side of the diaphragm, at least one side of the diaphragm of the second structure is ~~dipped into~~ disposed in an electric field for acceleration or focusing of electrons, ~~and~~ the diaphragm openings are oriented such that the opening surface of greater area faces the electric field of greater value, and the opening surface of lesser area facing the electric field of less value or in absence of an electric field.

Claim 52 (Currently Amended): The device according to Claim 33, in which each diaphragm opening comprises a bevelled, flat, concave, or convex opening edge profile, at least one side of the diaphragm of the second structure is ~~dipped into~~ disposed in an electric field for acceleration or focusing of electrons, ~~and~~ the diaphragm openings are oriented such that the opening surface of greater area faces the electric field of greater value, and the opening surface of lesser area facing the electric field of less value or in absence of an electric field.

Claim 53 (Currently Amended): The device according to Claim 33, in which at least one diaphragm opening has two different opposite opening surfaces, the opening surface of a first side of the diaphragm having an area greater than an area of the opening surface of a second side of the diaphragm, in which the second structure of diaphragm opening comprises two opposite sides, a first side facing an electric field, a second side facing another electric field, ~~and~~ the diaphragm openings are oriented such that the opening surface of greater area faces the electric field of greater value, and the opening surface of lesser area facing the electric field of less value or in absence of an electric field.

Claim 54 (Currently Amended): The device according to Claim 33, in which each diaphragm opening comprises a bevelled, flat, concave, or convex opening edge profile in which the second structure of diaphragm opening comprises two opposite sides, a first side facing an electric field, a second side facing another electric field, ~~and~~ the diaphragm openings are oriented such that the opening surface of greater area faces the electric field of greater value, and the opening surface of lesser area facing the electric field of less value or in absence of an electric field.

Claim 55 (Withdrawn): The device according to Claim 33, in which the second structure is subjected to at least one polarization potential.

Claim 56 (Withdrawn and Currently Amended): ~~An electronic emission device including plural electron beams comprising:~~ The device according to Claim 33, wherein
~~a first structure comprising a plurality of emitting sources of electron beam hybridized with a second structure comprising a plurality of diaphragm openings,~~
~~in which~~ the first structure ~~comprises~~ further includes a substrate, a cathode, ~~electron emitter means,~~ and an extraction grid, and
~~in which~~ the second structure forms a current collection means collector, insulated from the extraction grid and configured to collect part of the current emitted by the ~~emitter means~~ emitting sources, ~~measuring means~~ for measuring ~~[[of]]~~ the current collected, and means for ~~control~~ controlling, as a function measuring the collected current, ~~[[of]]~~ the current emitted by the ~~electron emitter means~~ emitting sources.

Claim 57 (Withdrawn and Currently Amended): The device according to Claim 56, wherein the ~~electron emitter means comprising~~ emitting sources include at least one micro-point or one nanotube.

Claim 58 (Withdrawn and Currently Amended): The device according to Claim 56, in which the ~~current control means~~ for controlling current emitted by the electron emitter ~~means comprises~~ includes a pulsed polarization means unit of the extraction grid.

Claim 59 (Withdrawn and Currently Amended): The device according to Claim 56, in which the ~~current control means~~ for controlling current emitted by the electron emitter ~~means comprises~~ includes a pulsed polarization means unit of the cathode.

Claim 60 (Withdrawn): The device according to Claim 56, in which the substrate is a CMOS substrate.

Claim 61 (Withdrawn and Currently Amended): The device according to Claim 56, in which the substrate is a CMOS substrate and ~~comprising~~ including electrical crossing enabling to connect the ~~collection means~~ collector and the extraction grid to the CMOS substrate.

Claim 62-63 (Cancelled).

Claim 64 (Withdrawn and Currently Amended): The device according to Claim 56, wherein the ~~current measuring~~ means for measuring the current is disposed being made on a substrate on which the ~~collection means are~~ collector is located.

Claim 65 (Withdrawn and Currently Amended): The device according to Claim 56, wherein the current-measuring means comprising means for measuring the current includes an amplifier on which a condenser or a resistor is mounted in counter-reaction.

Claim 66 (Withdrawn and Currently Amended): The device according to Claim 56, wherein the current-measuring means comprising means for measuring the current includes an amplifier on which a condenser or a resistor is mounted in counter-reaction and the current-measuring means comprising means for measuring current includes a measuring setup by current mirror.

Claim 67 (Withdrawn and Currently Amended): The device according to Claim 56, wherein the current-measuring means comprising means for measuring current includes an amplifier on which a condenser or a resistor is mounted in counter-reaction and the current-measuring means comprising means for measuring current includes a measuring setup by current mirror and the diaphragm openings being are circular or comprising include circular sectors.

Claim 68 (New). The device according to Claim 33, wherein the second structure is disposed completely above the emitting sources of the electron beams, and the second structure controls divergence of the electron beams.

Claim 69 (New): An electronic emission device including plural electron beams comprising:

- a first structure including a plurality of emitting sources of electron beams;
- a second structure including a plurality of diaphragm openings; and

one or more films with anisotropic conduction interposed between the first structure and the second structure and hybridizing the first structure with the second structure.